new properties as true novelties, makes easier the assumption that life and mind have emerged in similar fashion.

I may be very brief in my criticism of this doctrine, because I have made a more lengthy critical examination of it in another volume,[1]

First, I maintain—and in this I take a very unpopular position—that to apply the term [c] evolution * to the assumed history of the purely physical universe as well as to the history of the organic world is to confuse together, by the aid and misuse of this word, two radically unlike processes. The chemical effect of mere cooling, though it takes largely the form of the coming together of atoms in more complex molecules, is a process of an entirely different nature from the evolution of increasingly complex organisms. The former is a non-historical process in any strict sense; the combinations of the atoms into complex molecules will occur at any time and place at which sufficient dissipation of heat from some small area might occur; it is the simple expression of their atomic affinities, prevented up to that moment from asserting themselves by the too-high temperature or excessive speed of motion of the atoms. The latter process is not the result of any simple change of physical conditions, and is truly historical in that it can only proceed in a given succession of steps of increasing organization, requiring (even if the Neo-Darwinian theory be strictly true) vastly complex conjunctions and sequences of conditions of the most various kinds, each new stage building upon the succession of stages

already achieved.

Further, the higher products of the process of organic evolution (and I would maintain the lower also) manifest unmistakably goal-seeking, purposive, or teleological

[1] *Modern Materialism and Emergent Evolution,* 1928.